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The role of emotional schema in prediction of pathological worry in Iranian students

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Abstract

Worry is an important feature associated with Generalized Anxiety Disorder (GAD). Borkovec (2004) suggested that the core problem in GAD may be fear of emotional experience, with worry serving as a cognitive avoidance strategy for any emotional experience. The research sample consisted of 290 undergraduate students (176 male and 248 female) that selected by multistage stratified sampling. Penn State Worry Questionnaire (PSWQ) and Persian version of Leahy Emotional Schema Scale (LESS) were administered. Results showed that schemas of controllability, emotional self-awareness, expression and simplistic view of emotions can significantly predict pathological worry. Results are discussed in light of previous research and cognitive and emotional models in GAD.

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1. Introduction

Worry was first introduced in the third edition of Diagnostic and Statistical Manual of Mental Disorders as the main diagnostic criterion of Generalized Anxiety Disorder (GAD) that led to conduct various studies about structure of worry. Borkovec et al. (1983) have provided one of the first definitions of worry which has been widely accepted in studies related to worry. "Worry is a chain of thoughts and images, negatively affect-laden and relatively uncontrollable. The worry process represents an attempt to engage in mental problem-solving on an issue whose outcome is uncertain but contains the possibility of one or more negative outcomes. Consequently, worry is closely related to fear processes" (Borkovec et al. 1983).

Although researcher and authors in the field of pathological worry have known the symptoms to be associated with generalized anxiety disorder from the beginning; recent studies show that worry in the form of a continuum is possibly associated with a wide range of mental disorders, especially anxiety disorders (Kertz et al. 2012). Considering this, the important question which is raised is that what cognitive and emotional processes are involved in getting people to worry? Borkovec et al. (2004) states that the main problem in generalized anxiety disorder; generally can be caused by fear of emotional experience. Thus, he considers worry as a cognitive avoidance strategy to avoid experiencing negative and harrowing experience. However, Borkovec in his theory has not addressed the factors that cause person's avoidance from these emotional experiences.

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One of factors seems to cause the person to avoid emotional experiences is emotional schemas or how people conceptualize their emotions. Leahy (2002) presented the model of emotional schemas inspired by the emotion-centered model (Greenberg, 2002) and metacognitive theories (Wells, 1995). Leahy (2002) states in the model that emotional schemas are interpretations, policies and strategies that people use while experiencing a particular emotion. These interpretations and strategies all in the format of metacognitive beliefs of individual about emotions constitute emotional schemas. The model also implies that people having incompatible emotional schema are more likely to resist against some specific emotions and involved in a series of avoidance strategies that cause incidence and persistence of a variety of emotional disorders. So far, a few studies have been performed in this field. Leahy (2002) found that anxiety is associated with more guilt feeling about emotion, more simplistic view of emotion, emotion incomprehensibility, more mental rumination, less feeling acceptance, less emotion controllability and less agreement with others. Gould & Edelstein (2010) found in their study that worried individuals have less control perception over anxiety and internal and external signs of their emotions. The results of another study also showed that lack of control perception over emotional reactions is a unique predictor for clinical and non-clinical worry and in diagnosing Generalized Anxiety Disorder (Stapinski et al. 2010).

Generally, pathological worry creates many problems by interfering in individual's function and puts individual at risk of generalized anxiety disorder. Today, studies in the field of worry have reached a stage where many researchers in this field study this phenomenon to identify individuals at risk of pathological worry and the related disorders to be able to prevent occurrence of this disorder (Khawaja & Chapman, 2007). Despite importance and necessity of identifying predictive variables of pathological worry, few studies have been conducted in this field. Considering the above, this study sought to examine role of emotional schemas in predicting pathological worry in an Iranian normal sample.

2. Methodology

The present study design is a correlation type. The statistical population of this study consists of all university students in Shiraz University who were enrolled in school year 2011. Among 290 students with 20.53 (SD=2.8) age average, 107 male (20.40 age average; SD= 2.21) and 183 female (20.58 age average; SD= 3.09) were selected using multistage cluster sampling.

3. Instruments

The Penn State Worry Questionnaire: (Meyer et al. 1990) PSWQ is used, comprised of 16 items designed to evaluate the tendency to engage in excessive and uncontrollable worry. Items are rated on a 5-point Likert scale ranging from 1 ("not at all typical of me") to 5 ("very typical of me"). The PSWQ has high internal consistency ($\alpha = .86$ to $.95$), which indicates that items are responded to in a consistent manner. The PSWQ also has very good four-week test-retest reliability, $r = .74$ to $.93$, which suggests that responses remain stable over time (Molina & Borkovec, 1994). The questionnaire also shows evidence of convergent and divergent validity as it is more highly correlated with other measures of worry than with measures of anxiety and depression (Molina & Borkovec, 1994). In Iran, Dehshiri et al. (2009) in their study on 424 students examined psychometric features of this questionnaire. The results show that the reliability of Persian Version of PSWQ was desirable using internal consistency and test-retest methods with an interval of 1 month. Also in this study significant correlation of the questionnaire score with questionnaire score of trait anxiety and depression indicate the optimal criterion validity of this questionnaire.

Persian version of Leahy emotional schema scale (LESS): the original version of this scale has 50 items and assesses 14 emotional schemas. All items are marked from totally disagree to totally agree using a Likert scale of five degrees. Leahy (2002) examined validity of the emotional schema scale using correlation analysis of items with each other and correlation of each of its subscales with Millon Clinical Multi-axial Inventory (MCM-III), Beck Anxiety Inventory (BAI) and Beck Depression Inventory (BDI) on 53 psychiatric patients. Results of this study showed that a majority of 14-fold of scales is significantly correlated with anxiety and depression. Results of correlation between dimensions indicated the acceptable validity of this scale. Also its reliability has been reported

0.81 using Cronbach's alpha coefficient. In Iran, Khanzadeh et al. (2012) in their study on a student sample examined factor structure and psychometric features of this scale. In this study results of exploratory factor analysis revealed 13 factors that eventually number of items was reduced to 36 items. 13 emotional schemas assessed by Persian version of this scale are: uncontrollability, demand for rationality, emotional self-awareness, comprehensibility, mental rumination, consensus, acceptance of feelings, validation by others, higher values, simplistic view of emotion, guilt, expression and blame.

Also, Khanzadeh et al. (2012) used internal correlation coefficients of items with total score and the corresponding scale score for examining construct validity of this scale, and correlation coefficients of this scale with Beck Depression Inventory(BDI) and Beck Anxiety Inventory(BAI) for examining criterion validity. The results of this analysis indicate that the validity of this scale is acceptable. Moreover, in this study reliability of this scale using Cronbach's alpha methods was obtained in the range of 0.59 to 0.73, and retest reliability after two weeks was in the range of 0.56 to 0.71 (Khanzadeh et al. 2012).

4. Data analysis

The extracted data were analyzed through Pearson Correlation and stepwise regression using SPSS-16 software.

5. Results

To investigate the relationship between emotional schemas and pathological worry, Pearson correlation coefficients were calculated between these variables.

Table 1. Correlation matrix of research variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	M	SD
1	1														45.73	10.98
2	0.35**	1													8.87	3.33
3	0.07	0.13*	1												16.42	3.92
4	0.34**	0.43**	0.10*	1											12.54	4.02
5	0.24**	0.46**	0.01	0.43**	1										7.44	2.76
6	0.21**	0.38**	0.35**	0.34**	0.29**	1									14.87	3.27
7	-0.08	0.03	0.09	-0.13*	-0.06	0.11*	1								6.19	2.38
8	0.05	0.20**	0.51**	0.23**	0.01	0.37**	0.15**	1							12.67	2.93
9	0.01	0.17**	0.09	0.18**	0.17**	0.24**	0.15**	0.11*	1						6.09	1.55
10	0.03	0.18**	0.37**	0.10*	0.15**	0.39**	0.20**	0.35**	0.20**	1					11.87	2.25
11	0.13*	0.12*	0.48**	0.03	-0.03	0.30**	0.14**	0.29**	0.00	0.23**	1				8.27	2.23
12	0.21**	0.39**	0.28**	0.42**	0.43**	0.37**	-0.03	0.21**	0.17**	0.25**	0.06	1			8.99	3.05
13	-0.12	0.09	0.16**	0.03	-0.04	0.30**	0.20**	0.20**	0.14**	0.22**	0.22**	-0.06	1		7.96	2.38
14	0.25**	0.30**	0.20**	0.51**	0.29**	0.32**	-0.09	0.21**	0.11*	0.17**	0.18**	0.39**	0.12*	1	6.18	2.28

1. Pathological worry, 2. Uncontrollability, 3. Demand for rationality, 4. Emotional self-awareness, 5. Comprehensibility 6. Mental rumination, 7. Consensus, 8. Acceptance of Feelings, 9. Validation by others, 10. Higher values, 11. Simplistic view of emotions, 12. Guilt, 13. Expression, 14. Blame.

To investigate the role of predictive emotional schemas on pathological worry, stepwise regression method was used. Table 2 shows regression models and statistical indices related to pathological worry prediction through emotional schemas.

Table 2. Regression model, variance analysis, statistical indices of emotional schemas on pathological worry

Model	Predictive Variable	df	F	Sig	R	R ²	Estimation error
Step1	Control	1	41.24	0.001	0.353	0.125	10.27
Step2	Control, emotional self-awareness	2	28.63	0.001	0.407	0.166	10.05
Step3	Control, emotional self-awareness, expression	3	21.90	0.001	0.432	0.186	9.94
Step4	Control, emotional self-awareness, expression, simplistic view	4	18.16	0.001	0.45	0.203	9.86

As table 2 shows, regression analysis, after a four-step and entering 4 emotional schemas into the regression model, reached its most explanatory level. In the fourth step, by entering schemas of uncontrollability, emotional self-awareness, expression and simplistic view of emotion, in sum more than 20% of pathological worry variations were explained. Also the significance of F statistic in the fourth step shows the model of pathological worry prediction through these four schemas to be an appropriate one to fit the data in the field.

Finally, table 3 shows regression coefficients of emotional schemas on pathological worry. The results show that all four emotional schemas have a significant effect in explaining pathological worry variations, due to significance of t statistic.

Table 3. Regression coefficients of emotional schema on pathological worry

Variable	B	Standard error	β	t	Sig
Constant	32.214	3.09		10.41	0.001
Control	0.827	0.913	0.254	4.29	0.001
Emotional self-awareness	-0.586	0.152	-0.226	3.86	0.001
Expression	-0.778	0.246	-0.171	3.16	0.002
Simplistic view	0.612	0.253	0.132	2.41	0.016

Predictor: schemas of control, emotional self-awareness, expression and simplistic view of emotions

criterion: pathological worry

6. Discussion and Conclusion

The purpose of this study was to investigate the role of emotional schemas in prediction of pathological worry. According to the obtained results, schemas of uncontrollability, emotional self-awareness, expression and simplistic view to emotions can predict pathological worry.

The finding that emotional uncontrollability schema can predict pathological worry is consistent with metacognitive model of Wells (1995). Wells states in the model that an anxious person is always in a conflict between the fear that "worry is uncontrollable" and the belief that "worry protects him".

In acceptance based model (Roemer & Orsillo, 2002) the issue has also been noted that negative reaction to internal experiences, such as the belief that "emotions are excessive or uncontrollable" makes people face difficulty in reviewing, accepting and interpreting emotions. The model raises that people having pathological worry show negative reaction to their experiences; and they are urged to avoid these experiences and this makes them being involved in worry cycle.

This finding is in line with study of Belloch et al. (2007) which suggests individuals' beliefs about "uncontrollability" has a pivotal role in worry prediction. In addition, results of another study (Leahy, 2002) show that anxiety is associated with less controllability perception on emotion, more simplistic view to emotion and less emotion acceptance.

Consistent with Leahy Emotional Schema Model(LESM, Leahy, 2002) the finding shows that expression of emotion can predict pathological worry. Leahy(2007) states that "expression of emotion may allow the patient to test the beliefs that having anxiety will lead to escalation, loss of control, mental collapse, or physical danger. The patient's predictions about the consequences of expression can be elicited and set up as an experimental test of a theory of anxiety"(Leahy,2007). worried people do not express their emotion so it leads to maintenance of worry.

The finding that emotional self-awareness schema can predict pathological worry is also consistent with Emotional dysregulation model (EDM; Mennin et al. 2005). The model suggests that patients with pathological worry have less perception and a more negative attitude about their emotions than others. The second component of this model which has been proposed as poor understanding of emotion includes limitations in describing and naming emotions as well as restriction on informational access and use containing emotions.

Leahy(2002) in his emotional schema model defines schema of "simplistic view of emotions" as that person is unable to accept about himself, person or situation having two or more conflicting feelings and this conflict causes discomfort and confusion in him. The relation between simplistic view of emotions and pathological worry is also in line with the explanation that Dugas & Robichaud (2007) gives about intolerability of uncertainty. Dugas & Robichaud (2007) suggests that worried people perceive uncertain and ambiguous situations as stressful and uncomfortable, and experience chronic worry in response to such situations.

Generally, this study has several limitations. One of them is correlation nature of the present study; thus, causal inferences cannot be made of this study. The other one is that sample is limited to non clinical population; therefore, generalization of results is only limited to this group. According to these limitations, it's suggested that relationship between these variables be examined in another design format such as causal-comparative; so that strong causal inferences can be made in this regard. Also it is suggested that relationship of these variables also be performed in other populations especially in patients with anxiety disorders.

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